# Davis Monthan Air Force Base

**Boundaries:**

Davis Monthan Air Force Base (DMAFB) is located in eastern Tucson. The northern boundary gradually descends to the south from Golf Links Road to Irvington Road. The eastern boundary is Harrison Road, and Alvernon Way is the western boundary. The southernmost boundary is Valencia Road on the east side of the site area.

**Site History:**

- DMAFB is a 10,000-acre, training base for tactical aircraft crews as well as being the primary storage facility for obsolete or excess aircraft. DMAFB has been operational at this site since 1925.

- The Installation Restoration Program (IRP) was initiated in 1982. Studies had identified 49 potential areas of concern. Many of these sites had no confirmed contamination, and most of the sites identified for remediation have been cleaned up.

- In 1985, a release from a fuel line at the J3 Pumphouse (ST-35) resulted in the identification of soil and groundwater contamination. Groundwater remediation of the jet fuel spill in the area known as ST-35 Fuel Pumphouse No. J3 occurred briefly in 1994 and was turned off after the water was determined to be clean and free of contamination. This is the only site on base where groundwater samples revealed trace amounts of JP-4 components (benzene, toluene, ethyl benzene and xylene (BTEX)). The groundwater is below a naturally-occurring protective clay layer. An estimated 1.7 million cubic feet of subsurface soil is contaminated with JP-4. The site is near the center of the flight line and mostly paved. Following a 1994 soil vapor extraction (SVE) system study, an SVE system was constructed. This system continued to recover the BTEX constituents in the soil.

- The Main Base Landfill (LF-01) is a closed landfill located about 2,000 feet west of the main runway and occupies approximately 35 acres. The landfill was used from the early 1940s until 1976 for the disposal of household debris, metals, car and aircraft components, solvents, pesticides and other items. Between 1993 and 1994, soil and groundwater samples were taken and tested for volatile organic compounds (VOCs), metals, pesticides, polychlorinated biphenyls (PCBs), petroleum hydrocarbons, and other compounds. Analytical results were below regulatory standards. In 1999, a landfill cover was designed and installed. A landfill gas collection, control, and treatment system was installed.

- The aluminum dross contamination from past smelting operations on the base has been treated by solidification/stabilization and transported to an off-site landfill.

- The Former Titan Missile Silo Site #12 (AOC 8) was an off-base property that is currently being transferred to the Bureau of Land Management (BLM). In 1986, the missile site was deactivated and dismantled. The missiles and all fuels were removed. The top 25 feet of the silo was imploded, backfilled, and returned to native desert terrain.

**Site Status**:

- Groundwater levels have declined over 15 feet across the base since 1998, resulting in all three monitoring wells going dry at the J3 Pumphouse (ST-35) as well as the three monitoring wells at LF-01. As part of the Landfill LF-01 Closure and Post-Closure Maintenance Plan, the groundwater is monitored on a quarterly basis for one upgradient and two downgradient wells. Six new wells were installed in March-April 2003 at the J3 Pumphouse (ST-35) and at the Landfill (LF-01).

- Since September 1995, the SVE system has removed over 202,000 gallons of hydrocarbons from the soil. The SVE system was down for about a year in 2002 and was restarted in January 2003 after an replacement engine was acquired.

- The three new monitoring wells at the Landfill (LF-01) were sampled and no VOCs were above the AQWS. Maintenance of the landfill cover vegetation and integrity is ongoing. A landfill gas collection, control, and treatment system operates about 20 hours per week to maintain minimum levels of methane beneath the control tower.

- The Former Titan Missile Silo (AOC 8) is currently undergoing a limited Preliminary Assessment/Site Investigation and site reclamation. The site is to be transferred to BLM. Work plans for this assessment have been submitted and approved.

**Site Hydrogeology**:

- DMAFB is located within the Tucson Basin, a northwest trending alluvial valley. The Santa Cruz River flows northwesterly and provides the main drainage for the Tucson Basin and is located approximately 4.6 miles west of the Base.

- Groundwater occurs within the unconsolidated alluvial deposits consisting of interfingering sand, gravel, silt, and clay. The saturated thickness of these sediments is extremely variable, thin (less than 200 feet) toward the mountains and thickening (greater than 5,000 feet) toward the center of the basin. These deposits were distributed laterally by a constant changing stream course.

- In the vicinity of the Davis-Monthan AFB, the Pantano formation, Tinaja Beds, and Fort Lowell Formation are the primary sources of water. The Base is located in the Sonora Desert in an arid climate with a low precipitation rate of 12 inches per year and a high evaporation rate of 65 inches per year. Groundwater is the primary source of water in the Tucson area, though Central Arizona Project (CAP) water is being used more often. Groundwater is encountered at approximately 350 feet below ground surface (bgs). The groundwater table dropped 15 feet in three years from 1998 to 2001.

**Contaminants:**

The contaminants of concern (COCs) at the site include petroleum hydrocarbons and BTEX in soils at the ST-35 Jet fuel spill. COCs at the landfill include volatile organic compounds (VOCs), and metals. Contaminants of concern at the site may change as new data become available.

**Public Health Impact:**

A long term groundwater monitoring program is in place and wells are monitored quarterly. Contamination at the site is limited to the subsurface soil. There is no known risk to human health from the site.

**Community Involvement Activities:**

A restoration advisory board (RAB) was formed in 1994 and meets semiannually. The last meeting was held at DMAFB on March 19, 2003.

**Information Repositories**:

Interested parties can review site information at the ADEQ main office located at 1110 West Washington, Phoenix. Site information at ADEQ is available for review Monday through Friday from 8 a.m. to 5 p.m. Please contact the Superfund Programs Section file coordinator at (602) 771-4420, or (800) 234-5677 (Arizona toll free) to arrange a file review appointment.

**Contacts**:

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*In Arizona, but outside the Phoenix area, call toll-free at (800) 234-5677.